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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,914	06/27/2003	Andy Harjanto	13768.604.21	8127

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EXAMINER	
DAYE, CHELCIE L	

ART UNIT	PAPER NUMBER
2161	

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/607,914	HARJANTO, ANDY	
	Examiner	Art Unit	
	Chelcie Daye	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-11,13,15-18,22 and 23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-11,13,15-18,22 and 23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is issued in response to applicants amendment filed August 11, 2006.

2. Claims 1-4,6-11,13,15-18,and 22-23 are presented. Claims 5,12,14,and 19-21 were cancelled and no claims were added.

3. Claims 1-4,6-11,13,15-18,and 22-23 are pending.

4. Applicant's arguments filed August 11, 2006, have been fully considered but they are not persuasive.

Continued Examination Under 37 CFR 1.114

5. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 11, 2006 has been entered.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang (US Patent No. 5,627,979) issued May 6, 1997.

Regarding Claim 22, Chang discloses a mapping tool embodied on a computer-readable medium for associating a property of a class with an attribute of a schema class of a repository schema, the mapping tool comprising:

computer-executable instructions (column 40, lines 55-64, Chang);

presenting a first graphical user interface for user-selection of selectable object classes to be mapped to selectable schema classes and for receiving a user selection of at least one selectable object class and at least one selectable schema class from the graphical user interface (Figs.11-15; column 13, lines 21-54, Chang);

presenting a second graphical user interface for user-selection of at least one selectable property of a selected object class and at least one selectable attribute of a selected schema class and for receiving a user selection of a selected object property and a selected schema attribute (Fig.17; columns 13-14, lines 55-67 and 1-11, Chang); and

inserting metadata within a definition of the selected object class with metadata associating the selected object property with the selected schema attribute in response to receiving a user selection at the second graphical user interface of the selected object property and the selected schema attribute (column 14, lines 30-53, Chang).

Regarding Claim 23, Chang discloses a mapping tool wherein the second graphical user interface is only presented after first receiving user input selecting

said at least one selectable object class and said at least one selectable schema class from the graphical user interface (column 13, lines 55-66, Chang).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-4,6-11,13, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson (US Patent No. 6,016,499) filed July 21, 1997, in view of Van Huben (US Patent No. 6,484,177) filed January 13, 2000, and further in view of Srinivasan (US Patent No. 6,587,856) filed December 7, 1998.

Regarding Claim 1, Ferguson discloses a method for providing access to a data repository from an application, wherein the data repository includes any combination of relational databases and directory services, wherein data resident in the repository is organized according to at least an implicit or explicit schema defining at least one schema class having therein at least one schema attribute and wherein the application utilizes object oriented programming that includes an object class and an object property that have a different format than the corresponding at least one schema class and attribute utilized by the repository, the method comprising:

receiving from the application, an access command[1] (column 9, lines 15-19, Ferguson), wherein the access command identifies an object class and an object property of the object class (column 8, lines 3-11, Ferguson) and reading a mapping within the object class that identifies the object property of the object class and links the object property of the object class to the corresponding schema attribute (Fig.3; column 7, lines 10-17 and 53-57, Ferguson)[2]. However, Ferguson is silent with respect to an interface interposed between the application and the repository, a format specific to the application and that is different than a format utilized by the repository to define a corresponding schema class and schema attribute, translating, at the interface, the access command to a translated access command, wherein the translated access command identifies the schema class and the schema attribute corresponding to the object class and

[1]Access command corresponds to either database calls or database language statement.

the object property; and transmitting the translated access command to the repository to obtain access to the repository. On the other hand, Van Huben discloses an interface interposed between the application and the repository (Fig.1; column 11, lines 11-20, Van Huben), a format specific to the application and that is different than a format utilized by the repository to define a corresponding schema class and schema attribute (columns 1-2, lines 66-67 and 1-11, respectively, Van Huben), translating, at the interface, the access command to a translated access command (column 6, lines 21-39, Van Huben), wherein the translated access command identifies the schema class and the schema attribute corresponding to the object class and the object property (column 12-13, lines 49-67 and 1-23, respectively, Van Huben); and transmitting the translated access command to the repository to obtain access to the repository (column 17, lines 10-33, Van Huben). Ferguson and Van Huben are analogous art because they are from the same field of endeavor of translating between SQL statements and a repository interface. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Van Huben's teachings into the Ferguson system. A skilled artisan would have been motivated to combine as suggested by Van Huben at column 1, lines 48-54, in order to provide uniform means for managing any type of data across a large global enterprise. The system allows the means to be applied to data residing in a directory service, a simple file system, or a traditional database, resulting in

[2] In order to further clarify and understand how the object property corresponds to the schema attribute

fewer complications. However, the combination of Ferguson in view of Van Huben are silent with respect to the identified object class defined by a class definition having therein a definition of the object property and at least one metadata tag associated with the definition of the object property which identifies the schema attribute corresponding to the object property. On the other hand, Srinivasan discloses the identified object class defined by a class definition (column 8, lines 45-51, Srinivasan) having therein a definition of the object property (column 8, lines 31-36, Srinivasan) and at least one metadata tag associated with the definition of the object property which identifies the schema attribute corresponding to the object property (column 7, lines 1-20, Srinivasan)[3]. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Srinivasan's teachings into the Ferguson in view of Van Huben system. A skilled artisan would have been motivated to combine in order to guarantee that all of the associated information was properly retrieved. Allowing a class to have a definition, which has its attributes definitions connected, assures that the metadata, which is associated with both the class and attributes are linked accordingly. As a result, this leads to a more productive and accurate system.

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see columns 3-4, lines 66-67 and 1-25, Ferguson.
[3] EID "2" corresponds to the metadata tag.

Regarding Claim 2, the combination of Ferguson in view of Van Huben, disclose a method wherein translating the access command to a translated access command further comprises:

modifying the access command by removing a reference to the object property of the object class and by adding to the access command a reference to the schema attribute (column 11, lines 21-36, Van Huben).

Regarding Claim 3, the combination of Ferguson in view of Van Huben, and further in view of Srinivasan, disclose a method wherein the step of translating the access command to a translated access command further comprises altering a format of the command (alter is a synonym for translate; See Merriam-Webster Dictionary) to a different format that the repository is capable of processing to grant access to the repository (column 9, lines 15-24, Ferguson).

Regarding Claim 4, the combination of Ferguson in view of Van Huben, and further in view of Srinivasan, disclose a method wherein the step of translating the access command to a translated access command further comprises employing an application programming interface to process an intermediate command derived from the access command (column 7, lines 5-9, Ferguson).

Regarding Claim 6, the combination of Ferguson in view of Van Huben, and further in view of Srinivasan, disclose a method wherein the repository is an LDAP-compliant directory service (Fig. 5, item 48; column 8, lines 62-66, Ferguson), and wherein the schema is in accordance with the LDAP protocol (column 9, lines 1-3, Ferguson).

Regarding Claim 7, the combination of Ferguson in view of Van Huben, and further in view of Srinivasan, disclose a method wherein the repository is an LDAP-non-compliant[4] repository (column 8, lines 44-48, Ferguson), and wherein the schema, including the schema class and the schema attribute are implicit within the non-compliant repository (column 7, lines 15-17, Ferguson).

Regarding Claim 8, the combination of Ferguson in view of Van Huben, and further in view of Srinivasan, disclose a method comprising extracting the implicit schema and recording it as an express schema (column 7, lines 15-17, Ferguson).

Regarding Claim 9, the combination of Ferguson in view of Van Huben, and further in view of Srinivasan, disclose a method comprising:

[4] Examiner interprets non-compliant to mean "not", therefore by the database being ODBC-compliant it is not an LDAP rendering it non-compliant.

receiving a response from the repository pursuant to transmitting the translated access command to the repository (column 9, lines 37-41, Ferguson), wherein the received response identifies the schema class and schema attribute (column 9, lines 48-57, Ferguson);

translating the received response to a translated response (column 6, lines 21-39, Van Huben), wherein the translated response identifies the object class and object property in a format specific to the application and that is different than a format utilized by the repository to define the corresponding schema class and schema attribute (columns 1-2, lines 66-67 and 1-11, respectively, Van Huben); and

fulfilling the access command received from the application by transmitting the translated response to the application (column 10, lines 50-64, Ferguson).

Regarding Claims 10 and 11, the combination of Ferguson in view of Van Huben, and further in view of Srinivasan, disclose a computer-readable medium having stored thereon computer-executable instructions (column 6, lines 63-67, Ferguson).

Regarding Claim 13, the combination of Ferguson in view of Van Huben, and further in view of Srinivasan, disclose a method wherein transmitting the translated access command to the repository to obtain access to the repository comprises transmitting the translated access command to an intermediary API

that transmits a corresponding translated access command to the repository (columns 8-9, lines 59-67 and 1-5, respectively, Ferguson).

Regarding Claim 15, the combination of Ferguson in view of Van Huben, and further in view of Srinivasan, disclose a method wherein the access command is selected from the group consisting of a read command (column 9, lines 15-24, Ferguson), a write command, and a search command.

Regarding Claim 16, the combination of Ferguson in view of Van Huben, and further in view of Srinivasan, disclose a directory interface for providing access to a data repository from an application, wherein the data repository includes any combination of relational databases and directory services, wherein data resident in the repository is organized according to at least an implicit or explicit schema defining at least one schema class having therein at least one schema attribute and wherein the application utilizes object oriented programming that includes an object class and an object property that have a different format than the corresponding at least one schema class and attribute utilized by the repository, the directory interface comprising:

computer-executable instructions for implementing a method that includes:

receiving from the application, at an interface interposed between the application and the repository (Fig.1; column 11, lines 11-20, Van Huben), an

access command[5] (column 9, lines 15-19, Ferguson), wherein the access command identifies an object class and an object property of the object class (column 8, lines 3-11, Ferguson) in a format specific to the application and that is different than a format utilized by the repository to define a corresponding schema class and schema attribute (columns 1-2, lines 66-67 and 1-11, respectively, Van Huben);

translating, at the interface, the access command to a translated access command (column 6, lines 21-39, Van Huben), wherein the translated access command identifies the schema class and the schema attribute corresponding to the object class and the object property (column 12-13, lines 49-67 and 1-23, respectively, Van Huben), wherein translating the access command to a translated access command includes reading a mapping within the object class that identifies the object property of the object class and links the object property of the object class to the corresponding schema attribute (Fig.3; column 7, lines 53-57, Ferguson), and wherein the identified object class is defined by a class definition (column 8, lines 45-51, Srinivasan) having therein a definition of the object property (column 8, lines 31-36, Srinivasan) and at least one metadata tag associated with the definition of the object property which identifies the schema attribute corresponding to the object property (column 7, lines 1-20, Srinivasan)[6]; and

[5]Access command corresponds to either database calls or database language statement.
[6] EID "2" corresponds to the metadata tag.

transmitting the translated access command to the repository to obtain access to the repository (column 17, lines 10-33, Van Huben).

Regarding Claim 17, the combination of Ferguson in view of Van Huben, and further in view of Srinivasan, disclose a directory interface wherein translating the access command is performed by an application programming interface (column 7, lines 3-11, Ferguson).

Regarding Claim 18, the combination of Ferguson in view of Van Huben, and further in view of Srinivasan, disclose a directory interface wherein the repository is LDAP-compliant and wherein the application programming interface of the repository interface comprises an LDAP API (column 8, lines 62-67, Ferguson).

Response to Arguments

Applicant's arguments with respect to claims 22 and 23, wherein Glebov fails to disclose a mapping tool that provides first and second graphical user interfaces, wherein the first enables a user to select object classes to be mapped to selectable schema classes, and wherein the second graphical user interface is provided for user-selection of at least one selectable property of a selected object class and at least one selectable attribute of a selected schema class" and also fails to disclose the newly

amended limitation "inserting the metadata within the definition of a selected object class" have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues Srinivasan fails to "describe metadata used to read a mapping", in particular Srinivasan does not disclose, "identifying a schema attribute associated with an object property of an object class and which also identifies a schema attribute of a different schema class".

Examiner respectfully disagrees. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). As disclosed within the office action as stated above, Ferguson was relied upon for teaching "reading a mapping ...", found at column 7, lines 10-17 and 53-57. Therefore, the argument of Srinivasan failing to disclose metadata used to read a mapping is incorrect. Also, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., identifies a schema attribute of a different schema class) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). However, Srinivasan discloses at column 7, lines 1-20; wherein the subschema

identifies a schema attribute, which defines the metadata for object classes and attributes.

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chelcie Daye whose telephone number is 571-272-3891. The examiner can normally be reached on M-F, 7:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chelcie Daye
Patent Examiner
Technology Center 2100
September 10, 2006

Sana Al-Hashemi